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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Gerd BRANDHORST et al.

Serial No. 09/368,505

Group Art Unit 3754

Filed: August 5, 1999

Examiner: Philippe DERAESHANI

For: DEVICE FOR EMPTYING A FILM TUBE

BRIEF ON APPEAL

Commissioner for Patents
Washington, D.C. 20231

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Sir:

I. INTRODUCTION

This is an appeal from the third non-final Action dated November 30, 2001, in which the Primary Examiner rejected reissue Claims 6-38. A Reply was timely filed on February 20, 2002. The Notice of Appeal was timely filed on March 12, 2002, and this Brief on Appeal is being timely filed in triplicate. The Commissioner is hereby authorized to charge the required fee of \$320.00 under 37 C.F.R. 1.17(c) to Deposit Account No. 05-1323 (Docket #1860/48111RE).

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any such fee or any deficiency in fees or credit any overpayment of fees to Deposit Account No. 05-1323 (Docket #1860/48111RE).

II. REAL PARTY IN INTEREST

The real party in interest 3M ESPE AG.

III. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

IV. STATUS OF CLAIMS

Original Claims 1-5 stand allowed.

Reissue Claims 6-38 stand rejected.

The rejections of Claims 6-38 are appealed.

V. STATUS OF AMENDMENTS

A Reply was filed on February 20, 2002. Since the rejection of the claims was not final, it is assumed the Reply has been entered. In the reply, method Claims 6-10, 14-16, 18, 20, 22, 25, 27, 28, and 34-38 were amended to add positively recited method steps. It is believed that the amendments do not affect the status of the claims or of the rejections.

VI. SUMMARY OF INVENTION

The invention is a device for emptying a film tube which contains a flowable substance. The device comprises a cylindrical cartridge or housing 1, a substantially rigid cap 2 placed at one end of the cartridge 1, and a piston 3 inserted into the cartridge 1 from the other end. Col. 3, lines 6-16.

The film tube 15 is closed at one end 16 and has a ring 17 at the other end. The film tube 15 is seated in the cartridge 1 with the ring 17 seated at the cap 2, with the closed end 16 at the piston 3. The cap has a dispensing opening 9, an annular engaging portion 12 surrounding the dispensing opening and cooperating with the ring 17 for sealing the dispensing end of the tube, and a

cylindrical end portion 7 adapted to engage the end portion 4 of the housing 1. Col. 3, lines 17-24.

A gap remains between mutually facing surfaces of the end portions 6, 8 of the housing and the cap when the housing 1, cap 2, and tube 15 are assembled. When so assembled, the ring 17 abuts the engaging portion 12 of the cap 2 and the peripheral portion of the ring abuts the supporting surface of the housing. Col. 3, line 56 - Col. 4, line 2.

The invention also includes the method of using the device. The method includes inserting the film tube 15 into the cylindrical cartridge or housing 1 between the piston 3 and the cap 2 and exerting pressure on the piston 2. Col. 3, lines 45-55, and Col. 4, lines 15-23.

VII. ISSUES

There are two issues, based on the rejections made by the Examiner. The issues are:

A. Whether the rejection of method Claims 6-10, 14-16, 18, 20, 22, 25, 28, and 34-38 as based on alleged new matter is erroneous.

B. Whether the rejection of reissue Claims 11-38 as an improper recapture of broadened claimed subject matter surrendered in the original application is erroneous.

A. The Rejections Based on Alleged New Matter

The Examiner rejected method Claims 6-10, 14-16, 18, 20, 22, 25, 28, and 34-38 under 35 U.S.C. § 251 as being based on new matter. The Examiner also rejected method Claims 6-10, 14-16, 18, 20, 22, 25, 28, and 34-38 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in

the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor had possession of the claimed invention at the time the application was filed. In justifying both rejections, the Examiner said, “[t]he method of dispensing is new matter.”

B. The Rejection Based on Alleged Recapture

The Examiner rejected Claims 11-38 under 35 U.S.C. § 251 as allegedly being an improper recapture of broadened claimed subject matter surrendered in the application for patent upon which the present reissue is based, citing *Hester Industries Inc. v. Stein Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *Ball Corp. v. United States*, 729 F.2d 1429, 221 USPQ 289 (Fed. Cir. 1984); and *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997). The Examiner stated that a broadening aspect is present in the reissue which was not present in the original application for patent, the broadening aspect relating to subject matter that Applicants previously surrendered during the prosecution of the original application. He concluded that the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. § 251. As grounds for the assertion that Applicants are recapturing subject matter surrendered in the original patent, the Examiner referred to the supporting surface which is an element of, e.g., patent Claim 1. The Examiner said that the “supporting surface” is part of the structure used to define the claimed “gap” or “play” and he asserted that it cannot be removed from the claims. The Examiner further said that the definition of the gap is the portion of the claim that was put in the independent claims to make them allowable.

VIII. GROUPING OF CLAIMS

With respect to the rejection of method Claims, 6-10, 14-16, 18, 20, 22, 25, 28, and 34-38 as being based on new matter, all these claims stand or fall together.

With respect to the rejection of Claims 11-38 on the ground of improper recapture, all these claims stand or fall together.

IX. ARGUMENT

A. The Rejections Based Upon Alleged New Matter are Erroneous

For the first time in the protracted prosecution of this application, the Examiner rejected Claims 6-10, 14-16, 18, 20, 22, 25, 28, and 34-38 under 35 U.S.C. § 251 as being based on new matter added to the patent for which reissue is sought. Similarly, for the first time in the protracted prosecution of this application, the Examiner rejected the same claims under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed. The rejection under 35 U.S.C. § 112 is asserted to be because of new matter. According to the Examiner, the method of dispensing is the alleged new matter.

1. The Method of Use is Expressly Taught but, in any Event, is Inherent in the structure of the Device

Claims 6-10, 14-16, 18, 20, 22, 25, 28, and 34-38 are all drawn to the method of use of the apparatus claimed in Claims 1-5, 11-13, 17, 19, 21, 23, 26, 25, and 29-33, respectively. None of what is claimed is new matter.

First, attention is directed to, e.g., Column 3, lines 45-55, and Column 4, lines 15-23, where the method of use of the device of the invention is described. At Column 3, lines 45-55, it is taught that:

In operation of the device, a film tube 15, which is filled with a substance to be dispensed, is inserted into the cartridge 1 from the front end thereof until the peripheral portion 19 of the ring flange abuts the front edge 5 of the cartridge 1. ...

The cap 2 is then placed on the cartridge 1 with its end portion 7 surrounding the end portion 4 of the cartridge 1

At Column 4, lines 15-23, it is taught that:

When pressure is subsequently exerted on the rear end of the tube 15 by the advancing piston 3, this pressure is transmitted forward through the tube 15

Notwithstanding the express teachings of how to use the device of the invention, it is respectfully submitted that this is a device whose method of use is apparent. To recapitulate, the device comprises a cylindrical cartridge or housing 1, a substantially rigid cap 2 placed at one end of the cartridge 1, and a piston 3 inserted into the cartridge 1 from the other end. The film tube 15 is closed at one end 16 and has a ring 17 at the other end. The film tube 15 is seated in the cartridge 1 with the ring 17 seated at the cap 2, with the closed end 16 at the piston 3. The cap has a dispensing opening 9, an annular engaging portion 12 surrounding the dispensing opening and cooperating with the ring for sealing the dispensing end of the tube, and a cylindrical end portion 7 adapted to engage the end portion 4 of the housing 1. It is incomprehensible that one skilled in the art, when faced with a housing having a piston at one end and a dispensing cap at the other end, and with a foil bag containing a flowable substance would not know to place the bag in the housing, secure the cap, and use the piston to cause the flowable substance to be ejected.

**2. *One Skilled in the Art Would Know that
the Applicants Were in Possession of the Method,
as Required by 35 U.S.C. § 112, First Paragraph***

The purpose of the description requirement of § 112 is to assure that the applicant was in full possession of the claimed subject matter on the date of the filing of the application. *Fields v. Conover*, 443 F.2d 1386, 170 USPQ 276 (CCPA 1971). To comply with the description requirement, the specification must clearly convey to those skilled in the art the information that the applicant has invented the specific subject matter later claimed. *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90 (CCPA 1976). Section 112 is incorporated in § 120 to insure that the applicant was in full possession of the claimed subject matter on the filing date of the parent application. *In re Edwards*, 568 F.2d 1349, 1351, 196 USPQ 465, 467 (CCPA 1978). Similarly, the provisions of § 112 are incorporated in § 251. *Hester Indus., Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641, 1651 (Fed. Cir. 1998), citing *In re Amos*, 953 F.2d 613, 618, 21 USPQ2d 1271, 1275 (Fed. Cir. 1991).

It is not necessary to describe the subject matter of the later claim *in haec verba*. *In re Lukach*, 442 F.2d 967, 969, 169 USPQ 795 (CCPA 1971). Further, the disclosure of the later claimed aspects of the invention can be inherent. *Kennecott Corp. v. Kyocera Int'l, Inc.*, 835 F.2d 1419, 5 USPQ2d 1194 (Fed. Cir. 1987), cert. denied, 486 U.S. 1008 (1988). The claims of the patent in suit in *Kennecott*, which issued on a CIP application, were entitled to the benefit of the filing date of the parent application. The court held that the express disclosure in a subsequent patent application of an inherent property of a product does not deprive that product of the benefit of an earlier filing date. Nor does the

inclusion of a description of that property in later-filed claims change this reasonable result. “By disclosing in a patent application a device that inherently performs a function, operates according to a theory, or has an advantage, a patent applicant necessarily discloses that function, theory, or advantage even though he says nothing concerning it.” *In re Reynolds*, 443 F.2d 384, 389, 170 USPQ 94, 98 (CCPA 1971), quoting *Technicon Instruments Corp. v. Coleman Instruments, Inc.*, 225 F.Supp. 630, 640-41, 150 USPQ 227, 236 (N.D. Ill. 1966), *aff’d*, 385 F.2d 391, 155 USPQ 369 (7th Cir. 1967). *See, also, Therma-Tru Corp. v. Peachtree Doors, Inc.*, 44 F.3d 988, 33 USPQ2d 1274 (Fed. Cir. 1995); *In re Smythe*, 480 F.2d 1376, 1384, 178 USPQ 279, 285 (CCPA 1973).

In the instant case, the very description of the device of the product claims and its mode of operation is a description of the method of use of Claims 6-10, 14-16, 18, 20, 22, 25, 28, and 34-38. The rejection under 35 U.S.C. § 112, first paragraph, is, therefore, in error and should be reversed.

3. By Satisfying the Requirements of 35 U.S.C. § 112, First Paragraph, the Applicants have Satisfied 35 U.S.C. § 251

While the preceding discussion concentrated on the requirements of 35 U.S.C. § 112, first paragraph, it applies equally to the rejection under 35 U.S.C. § 251. “We agree with, and, in any event, are bound by, the statement in [*In re*] *Mead*, [581 F.2d 251, 256, 198 USPQ 412, 417 (CCPA 1978),] quoted above, that the inquiry under § 251 as to whether the new claims are for the invention originally disclosed is analogous to the analysis required by § 112, ¶ 1. Under one aspect of that analysis, a court must ascertain whether ‘the disclosure originally filed [conveys] to those skilled in the art that applicant had invented

the subject matter later claimed.’ [In re] *Wilder*, 736 F.2d [1516] at 1520, 222 USPQ [369] at 372 [(Fed. Cir. 1984)]; *see also In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); *In re Edwards*, 568 F.2d 1349, 1351, 196 USPQ 465, 467 (CCPA 1978) (“The function of the description requirement is to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him.”) *In re Amos*, 953 F.2d at 618, 21 USPQ2d at 1275.

The rejection under 35 U.S.C. § 251 based on alleged new matter is, therefore, in error and should be reversed.

B. The Rejection Under 35 U.S.C. § 251 as Being an Improper Recapture of Broadened Claimed Subject Matter Surrendered in the Original Application is in Error

The Examiner rejected Claims 11-38 under 35 U.S.C. § 251 as allegedly being an improper recapture of broadened claimed subject matter surrendered in the application for patent upon which the present reissue is based. For the first time, in this Action, the Examiner asserted that “the supporting surface is part of the structure used to define the ‘gap’ or ‘play’”.

As is well-known, recapture occurs when an applicant attempts to obtain in a reissue claims which were cancelled or otherwise relinquished during prosecution of the original patent. It is clear from the case law that an applicant may not omit a limitation *which was relied upon for patentability*. *See e.g., Hester Industries Inc. v. Stein Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *Ball Corp. v. United States*, 729 F.2d 1429, 221 USPQ 289 (Fed. Cir. 1984); and *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997).

The recent case of *Dethmers Mfg. Co. v. Automatic Equipment Mfg. Co.*, 60 USPQ2d 1929, 1932 (Fed. Cir. 2001) is instructive. In *Dethmers*, the court discussed a Reissue Declaration which said:

The first error that arose in the claims of the patent was the inclusion of the subject matter of [application] claims 2 and 3 in the amended base [application] claim 7. This subject matter was not material to the invention. This subject matter had already been disclosed in Johnson's own prior patent which was cited by the Examiner to reject [application] claims 2 and 3. Furthermore, the Examiner stated that the basis for allowability was that the prior art failed to teach [another limitation]. This structure has nothing to do with the subject matter of [application] claims 2 and 3. Accordingly, Johnson claimed less than he had the right to claim when the subject matter of [application] claims 2 and 3 and related language were included in amended [application] base claim 7.

The PTO allowed the reissue claims based, *inter alia*, on that statement.. Neither the defendant nor the district court challenged that action. The Federal Circuit treated it as given. *Id.* at 1935.

The instant case is almost identical to the *Dethmers* fact situation:

Original Claim 3 of the parent application of the original patent* read:

The device of claim 2, wherein said housing has a ring supporting surface, said end portions of the housing and the cap having such axial dimensions that a play is retained between their mutually facing surfaces when said ring abuts said engaging portion of the cap and the peripheral portion of said ring abuts said supporting surface.

* The instant application is for reissue of U.S. Patent No. 5,653,360 which is based on an application which was a continuation of an earlier application. The '360 patent is referred to herein as "the original patent" and the earlier application on which it was based is referred to herein as "the parent application".

Thus, parent application Claim 3 essentially had two structural limitations:

1. "said housing has a ring supporting surface"; and
2. "said end portions of the housing and the cap having such axial dimensions that a play is retained between their mutually facing surfaces"

and a limitation describing the environment:

3. "when said ring abuts said engaging portion of the cap and the peripheral portion of said ring abuts said supporting surface."

In the Office Action of June 2, 1995, in the parent application, the Examiner rejected application Claims 1, 2, and 4 under 35 U.S.C. § 102(b) as anticipated by a reference (U.S. Patent No. 3,815,787) to Spies. The Examiner explained:

Spies shows a device for emptying a tube (14) comprising a ring (50), housing (16), a piston (40), cap (64), dispensing opening (92), annular engaging portion (70) **and supporting surface (24)**. [Emphasis added.]

At the same time, the Examiner indicated the allowability of application Claim 3.

It was limitation 2 which was relied upon for patentability and not limitation 1 because limitation 1 was taught in the prior art: in the Office Action of June 2, 1995, the Examiner said that the prior art Spies reference teaches a "supporting surface (24)". Thus, that limitation was not relied upon for patentability and may, under the prevailing case law, be omitted.

The very limitation which the same Examiner now asserts is critical to the claims is a limitation taught by the prior art and which he considered not to be critical to patentability in the prosecution of the parent application and the original patent.

The Examiner's new contention that the "the supporting surface is part of the structure used to define the 'gap' or 'play'", is belied by the clear language of the claims of the original patent, e.g., the instant Claim 1 which says, in relevant part (separate paragraphs and clause numbering created here for ease in understanding):

[A] a gap remains between mutually facing surfaces of said end portions of

[1] the housing and

[2] the cap

[B] when said housing, cap and tube are assembled

with said ring abutting said engaging portion of the cap and the peripheral portion of said ring abutting said supporting surface of said housing.

Claim 1 itself defines the gap as being formed by mutually facing surfaces of end portions of (1) the housing and (2) the cap, when the device is assembled. Assembly involves the ring abutting the engaging portion of the cap and the peripheral portion of the ring abutting the supporting surface of the housing. Nowhere do any of the original patent claims or the specification require that the supporting surface define the gap or play. Clause [B] is a functional limitation which merely describes proper assembly to achieve a desired result. Clause [A] defines the structure which results in the gap or play.

It is significant that original patent Claim 1 differs from parent application Claim 3 in the inclusion of the functional phrase "when said housing,

cap and tube are assembled". This is consistent with the statement in the "Remarks" section of the amendment in the parent application in which parent application Claims 1-3 were combined, "When the housing, cap and tube are assembled as shown in the application drawing, a gap remains between the shoulder 6 of the housing and the edge 8 of the cap." Amendment of August 23, 1995, pages 2-3.

The facts of the instant case fall squarely within the facts of the *Dethmers Mfg. Co.* case. The limitation which the Examiner now asserts to be critical to the patentability of the original patent claims is a limitation which the same Examiner had held to be part of the prior art. The inclusion of that limitation in the original patent claims was error. This is a situation which 35 U.S.C. § 251 was meant to cure. 35 U.S.C. § 251 is a statute which is remedial in nature and should be liberally construed. *In re Weiler*, 790 F.2d 1576, 1579. 229 USPQ 673, 675 (Fed. Cir. 1986).

As for the method claims, the failure to appreciate and claim the method in the original patents was "error" under 35 U.S.C. § 251. *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 48 USPQ2d 1225, 1234 (Fed. Cir. 1998)

This rejection, therefore, is in error and should be reversed.

X. CONCLUSION

The rejection of the method claims as being based on new matter is erroneous. The method of use of the claimed device is manifest. The rejection of Claims 11-38 as being based on improper recapture is erroneous. The limitation omitted from the claims was not critical to patentability of the original patent claims. If this is recapture, then the statutory scheme of allowing broadened

reissues within two years of the patent issue date is thwarted. This rejection should be reversed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'H. Cantor', written over the typed name.

Herbert I. Cantor

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April 10, 2002

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APPENDIX

6. A method of emptying a film tube which contains a substance to be dispensed using the device of Claim 1, comprising inserting said film tube in said cylindrical housing between said piston and said cap and exerting pressure on said piston.

7. A method of emptying a film tube which contains a substance to be dispensed using the device of Claim 2, comprising inserting said film tube in said cylindrical housing between said piston and said cap and exerting pressure on said piston.

8. A method of emptying a film tube which contains a substance to be dispensed using the device of Claim 3, comprising inserting said film tube in said cylindrical housing between said piston and said cap and exerting pressure on said piston.

9. A method of emptying a film tube which contains a substance to be dispensed using the device of Claim 4, comprising inserting said film tube in said cylindrical housing between said piston and said cap and exerting pressure on said piston.

10. A method of emptying a film tube which contains a substance to be dispensed using the device of Claim 5, comprising inserting said film tube in said cylindrical housing between said piston and said cap and exerting pressure on said piston.

11. A device for emptying a film tube which contains a flowable substance and has a dispensing end provided with a ring, the device comprising

a housing with a displaceable piston and a cap and being adapted to receive the tube between said piston and said cap,

wherein the cap has a dispensing opening, an annular engaging portion surrounding the dispensing opening and cooperating in use with said ring for sealing a dispensing end of the film tube, and a cylindrical end portion adapted to engage an end portion of the housing, and

wherein a gap remains between mutually facing surfaces of said end portions of the housing and the cap when said housing, cap and tube are assembled with said ring abutting said annular engaging portion of the cap.

12. The device of Claim 11, wherein said ring has a conical sealing surface and said engaging portion is formed by an annular portion of said cap.

13. The device of Claim 11, wherein said ring has an annular sealing surface and said engaging portion is formed by an annular portion of said cap which in use abuttingly engages said annular sealing surface of said ring.

14. A method of emptying a film tube which contains a flowable substance using the device of Claim 11, comprising inserting said film tube in said housing between said piston and said cap and exerting pressure on said piston.

15. A method of emptying a film tube contains a flowable substance using the device of Claim 12, comprising inserting said film tube in said housing between said piston and said cap and exerting pressure on said piston.

16. A method of emptying a film tube which contains a flowable substance using the device of Claim 13, comprising inserting said film tube in

said housing between said piston and said cap and exerting pressure on said piston.

17. A device for emptying a film tube which contains a flowable substance and has a dispensing end provided with a ring, the device comprising a housing having an end portion, a displaceable piston and a cap and being adapted to receive the tube between said piston and said cap in said housing, the cap having a dispensing opening and an annular engaging portion surrounding the dispensing opening and cooperating with said ring for sealing the dispensing end of the tube, the end portion of the housing being further formed with an annular shoulder, said cap having an edge portion facing said annular shoulder, the housing and the cap being so dimensioned in the moving direction of said piston that a gap is retained between said annular shoulder and said edge portion of the cap.

18. A method of emptying a film tube which contains a flowable substance using the device of Claim 17, comprising inserting said film tube in said housing between said piston and said cap and exerting pressure on said piston.

19. An assembly for dispensing a flowable substance from a film tube, said assembly comprising:

- _____ a housing having housing side walls,
- _____ a piston movably disposed in said housing, and
- _____ a detachable end cap operable to close an end of the housing,
- _____ wherein said end cap, said housing sidewalls, and said piston
together form a film tube accommodating space, and

wherein said housing and said end cap have mutually facing end portion surfaces configured such that, during use with a film tube in said space and the end cap in an assembled condition, said end portion surfaces are spaced from one another to form a gap to thereby ensure that pressure exerted on the film tube by the piston results in a sealing force between the ring and cap even with jamming of the film tube in the interior of the housing.

20. A method of dispensing a flowable substance using the assembly of Claim 19, comprising inserting said film tube in said space and exerting pressure on said piston.

21. An assembly for dispensing a flowable substance from a film tube, said assembly comprising:

a housing having housing side walls,

a piston movably disposed in said housing, and

a detachable end cap operable to close an end of the housing,

wherein said end cap, said housing sidewalls, and said piston together form a film tube accommodating space,

wherein said housing side walls have an end section which is disposed inside an end section of the cap when the cap is in an assembled in use condition, and

wherein said housing side walls include side wall end sections operable to form an abutment surface for a ring disposed at an end of a film tube disposed in the film tube accommodating space during use of said assembly.

22. A method of dispensing a flowable substance using the assembly of Claim 21, comprising inserting said film tube containing said flowable substance in said space and exerting pressure on said piston.

23. An assembly for dispensing a flowable substance, comprising:

a housing having housing side walls,

a piston movably disposed in said housing,

a detachable end cap operable to close an end of the housing, said end cap, said housing sidewalls, and said piston together forming a film tube accommodating space, and

a film tube disposed in said space and containing a flowable substance,

wherein said housing and said end cap have mutually facing end portion surfaces configured such that, during use with a film tube in said space and the end cap in an assembled condition, said end portion surfaces are spaced from one another to form a gap to thereby ensure that pressure exerted on the film tube by the piston results in a sealing force between the ring and cap even with jamming of the film tube in the interior of the housing.

24. An assembly according to Claim 23, wherein said flowable substance is dental impression material.

25. (Amended) A method of dispensing a flowable substance using the assembly of Claim 23, comprising exerting pressure on said piston.

26. An assembly for dispensing a flowable substance, comprising:

a housing having housing side walls,

a piston movably disposed in said housing,

a detachable end cap operable to close an end of the housing with
said end cap, said housing sidewalls, and said piston together forming a
film tube accommodating space, and

a film tube containing a flowable substance,

wherein said housing side walls have an end section which is
disposed inside an end section of the cap when the cap is in an assembled
in use condition, and

wherein said housing side walls include side wall end sections
operable to form an abutment surface for a ring disposed at an end of a
film tube disposed in the film tube accommodating space during use of
said assembly.

27. (Amended) A method of dispensing a flowable substance utilizing the
assembly of Claim 26, wherein said flowable substance is contained in said film
tube, said method comprising disposing said film tube in said space and exerting
pressure on said piston.

28. A method according to Claim 25, wherein said flowable substance is a
dental impression material.

29. An assembly for dispensing a flowable substance, comprising:
a housing having housing side walls,

a piston movably disposed in said housing,

a detachable end cap operable to close an end of the housing, said
end cap, said housing sidewalls, and said piston together forming a film
tube accommodating space, and

a film tube disposed in said space and containing a flowable substance,

wherein said housing, end cap, and film tube are configured so that a first annular portion of said film tube sealingly engages an annular sealing portion of the end cap and a second annular portion of said film tube is spaced from facing surfaces of said end cap.

30. An assembly according to Claim 29, wherein said cap includes a dispensing opening, and

wherein said annular sealing portion of the end cap extends around said dispensing opening.

31. An assembly according to Claim 30, wherein said second annular portion of said film tube extends around said first annular part.

32. An assembly according to Claim 29, wherein said first and second annular parts are disposed on a ring.

33. An assembly according to Claim 32, wherein said ring is adhered to an end of the film tube.

34. A method of dispensing a flowable substance using the assembly of Claim 29, comprising exerting pressure on said piston.

35. A method of dispensing a flowable substance using the assembly of Claim 30, comprising exerting pressure on said piston.

36. A method of dispensing a flowable substance using the assembly of Claim 31, comprising exerting pressure on said piston.

37. A method of dispensing a flowable substance using the assembly of Claim 32, comprising exerting pressure on said piston.

38. A method of dispensing a flowable substance using the assembly of Claim 33, comprising exerting pressure on said piston.--